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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/571,730	03/16/2007	Jens Otterbach	10191/4357	2781

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EXAMINER	
TEIXEIRA MOFFAT, JONATHAN CHARLES	

ART UNIT	PAPER NUMBER
2863	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/571,730	OTTERBACH ET AL.	
	Examiner	Art Unit	
	JONATHAN TEIXEIRA MOFFAT	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 July 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *5-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *5-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 March 2006* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/19/2009*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Applicant's amendments to the specification and claims, filed 7/13/2009, are accepted and appreciated by the examiner.

Drawings

Applicant's amendments and comments of 7/13/2009, indicate a replacement drawing sheet. However, the record does not contain such a sheet. Applicant is requested to transmit a replacement.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 7/13/2009 has been considered by the examiner.

Examiner's Comments

Claims 8, 12 and 13 as amended include the limitation that there be data transmission "from the sensors to the control unit but not from the control unit to the sensors" (emphasis added). Even though this limitation has support in the specification, the examiner notes that it is something of a misrepresentation of what examiner understands to be the workings of the present invention. By examiner's understanding, the control unit raises the voltage and the sensors respond (after a delay) to this raised voltage. The examiner maintains that this initial raising of voltage is in fact a form of "data transmission". Effectively, by raising the voltage, the control unit has communicated to the sensors that they should transmit their data. As "data" is merely information, the raised voltage is also a "data transmission". However, in the examiner's understanding of the present invention, the sensors respond using a different method of

communication from merely raising a voltage. Thus, the examiner interprets the limitation of the above cited portions of claims 8 and 12-13 to be that the control unit sends a simple signal which initiates the transfer of more complex data ('1's and '0's or analog data) from the sensors using a different protocol. With respect to the following prior art rejections, this interpretation will be relied upon.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 5-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Gangemi (US pat 4540890).

With respect to claim 5, Gangemi discloses an apparatus comprising:

1) A first sensor (Figs 1 and 3 item "S") powered by a line (Figs 1-3 item 3), the first sensor preprogrammed with a first time interval for transmitting data via the line (Fig 3 item 23 and Figs 4 and 7 and column 4 lines 1-7). *Each sensor has a unique count stored which corresponds to a time interval to wait based on a number of pulses. The time interval for transmission (t1-t2) is then defined by the one pulse following its transmission start time during which it uses frequency modulation to communicate.*

2) A second sensor (Figs 1 and 3 item "S", *Fig 1 shows multiple sensors on multiple remote units*) powered by the line (Figs 1-3 item 3, *all remote units are in parallel*) in parallel with the first sensor, the second sensor preprogrammed with a second time interval for

transmitting data via the line (Fig 3 item 23 and Figs 4 and 7 and column 4 lines 1-7). *Each sensor has a unique count stored which corresponds to a time interval based on a number of pulses. As above, the second sensor waits its turn and responds in interval t3-t4.*

3) A first timing sequence control system included in the first sensor (Fig 3 items 20-23 and column 4 lines 5-14). *This system counts the power level changes from the central control unit (like timing pulses). A set amount of time from the initial power level change, it responds by current fluctuation and only for another set amount of time (one pulse from the control unit).*

4) A second timing sequence control system included in the second sensor (Fig 3 items 20-23 and column 4 lines 5-14). *Identical to that of the first sensor, each unit has one with a unique count in its memory.*

5) Wherein, at a point in time of receiving a first power level, the first timing sequence control system is triggered and, upon being triggered, controls the transmission of the first sensor so that the first sensor transmits data via the line for the first time interval (Figs 4 and 7 and column 5 lines 25-60). *As above, the control unit changes the power level (raises the voltage above Va). The first sensor unit in line (Im) responds during a set time period. In figure 4, this is t1-t2. The second sensor unit (Im+1) waits by counting pulses until its designated response period t3 and responds for only a set amount of time, then a third sensor (not shown) will take its turn..*

6) Wherein, at a point in time of receiving the first power level, the second timing sequence control system is triggered and, upon being triggered, controls the transmission of the second sensor so that the second sensor transmits data via the line for the second time interval after the first time interval (Figs 4 and 7 and column 5 lines 25-60). *In the embodiment that the*

control unit is sending regular pulses on the power line (essentially timing) each sensor unit waits an amount of time based upon its stored count timing value (stored in memory 23 in figure 3) before responding. Each sensor unit, regardless of when it responds, begins counting (and thus its waiting interval) at the first pulse sent by the control unit and thus at the same time. This means that each unit is responding to the same initial voltage level though some are waiting longer than others. This is because if some sensors ignored the initial "pulse" they would be out-of-synch and the system would not function. Thus they are all responding based upon the first power level change.

With respect to claims 6 and 10, Gangemi discloses that the first and second sensors are always powered at supplied at least a second power level, the second power level being lower than the first power level (Figs 4 and 7). *The power supplied never falls below a certain voltage. If it did the sensors would be un-powered and unable to function.*

With respect to claims 7 and 11, Gangemi discloses that the first and second sensors detect the first power level via a voltage change (Figs 4 and 7). *The voltage change signals the start of the delay counting of each sensor component as explained above.*

With respect to claims 8 and 12, Gangemi discloses that the first and second sensors are connected to a control unit via the line (Figs 4 and 7, *they use frequency modulation*), data transmission only being provided from the sensors to the control unit, and not from the control unit to the sensors (Figs 4 and 7 and column 4 lines 15-28). *As in Examiner's Comment above, the control unit merely changes voltages in a timing pulse. It does not "address" sensors or transmit digital data etc. The sensors, however respond with frequency modulated data "indicative of the value of a physical quantity" (from above cited portion of Gangemi). Thus,*

Gangemi meets the claimed limitation since the control unit, like that of applicant's invention, does not send data in the same way that the sensors do.

With respect to claim 9, Gangemi discloses a method comprising:

1) Powering a first sensor (Figs 1 and 3 item "S") by a line (Figs 1-3 item 3), the first sensor preprogrammed with a first time interval for transmitting data via the line (Fig 3 item 23 and Figs 4 and 7 and column 4 lines 1-7). *Each sensor has a unique count stored which corresponds to a time interval to wait based on a number of pulses. The time interval for transmission (t1-t2) is then defined by the one pulse following its transmission start time during which it uses frequency modulation to communicate.*

2) Powering a second sensor (Figs 1 and 3 item "S") by the line (Figs 1-3 item 3) in parallel (*Fig 1 shows many sensors in parallel*) with the first sensor, the second sensor preprogrammed with a second time interval for transmitting data via the line (Fig 3 item 23 and Figs 4 and 7 and column 4 lines 1-7). *Each sensor has a unique count stored which corresponds to a time interval based on a number of pulses. As above, the second sensor waits its turn and responds in interval t3-t4.*

3) Wherein a first timing sequence control system is included within the first sensor and a second timing sequence control system is included within the second sensor (Fig 3 items 20-23 and column 4 lines 5-14). *This system counts the power level changes from the central control unit (like timing pulses). A set amount of time from the initial power level change, it responds by current fluctuation and only for another set amount of time (one pulse from the control unit). Each sensor times out a different delay and responds for only one time period in turn.*

4) Wherein, at a point in time of receiving a first power level, the first timing sequence control system is triggered and, upon being triggered, controls the transmission of the first sensor so that the first sensor transmits data via the line for the first time interval (Figs 4 and 7 and column 5 lines 25-60). *As above, the control unit changes the power level (raises the voltage above Va). The first sensor unit in line (Im) responds during a set time period. In figure 4, this is t1-t2. The second sensor unit (Im+1) waits by counting pulses until its designated response period t3 and responds for only a set amount of time, then a third sensor (not shown) will take its turn..*

5) Wherein, at a point in time of receiving the first power level, the second timing sequence control system is triggered and, upon being triggered, controls the transmission of the second sensor so that the second sensor transmits data via the line for the second time interval after the first time interval (Figs 4 and 7 and column 5 lines 25-60). *In the embodiment that the control unit is sending regular pulses on the power line (essentially timing) each sensor unit waits an amount of time based upon its stored count timing value (stored in memory 23 in figure 3) before responding. Each sensor unit, regardless of when it responds, begins counting (and thus its waiting interval) at the first pulse sent by the control unit and thus at the same time. This means that each unit is responding to the same initial voltage level though some are waiting longer than others. This is because if some sensors ignored the initial "pulse" they would be out-of-synch and the system would not function. Thus they are all responding based upon the first power level change.*

With respect to claim 13, Gangemi discloses that the first and second sensors are always powered at supplied at least a second power level, the second power level being lower than the

first power level (Figs 4 and 7; *The power supplied never falls below a certain voltage. If it did the sensors would be un-powered and unable to function*), wherein the first and second sensors detect the first power level via a voltage change (Figs 4 and 7; *The voltage change signals the start of the delay counting of each sensor component as explained above*), and wherein the first and second sensors are connected to a control unit via the line (Figs 4 and 7, *they use frequency modulation*), data transmission only being provided from the sensors to the control unit, and not from the control unit to the sensors (Figs 4 and 7 and column 4 lines 15-28). *As in Examiner's Comment above, the control unit merely changes voltages in a timing pulse. It does not "address" sensors or transmit digital data etc. The sensors, however respond with frequency modulated data "indicative of the value of a physical quantity" (from above cited portion of Gangemi). Thus, Gangemi meets the claimed limitation since the control unit, like that of applicant's invention, does not send data in the same way that the sensors do.*

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JONATHAN TEIXEIRA MOFFAT whose telephone number is (571)272-2255. The examiner can normally be reached on Mon-Fri, from 7:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/jtm/
JTM
9/23/2009

/Bryan Bui/
Primary Examiner, Art Unit 2863